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PATENT APPLICATION

ATTORNEY DOCKET NO. 10007033-1IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Geske et al.

Confirmation No.: 2182

Application No.: 10/062,681

Examiner: Qin, Yixing

Filing Date: 01/31/2002

Group Art Unit: 2625

Title: A System And Method For Electronically Monitoring The Content Of Print Data

Mail Stop Appeal Brief-Patents  
Commissioner For Patents  
PO Box 1450  
Alexandria, VA 22313-1450

## TRANSMITTAL OF APPEAL BRIEF

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on 11/30/07.☒ The fee for filing this Appeal Brief is \$510.00 (37 CFR 41.20).☐ No Additional Fee Required.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d)) for the total number of months checked below:☐ 1st Month  
\$120☐ 2nd Month  
\$460☐ 3rd Month  
\$1050☐ 4th Month  
\$1640☐ The extension fee has already been filed in this application.☐ (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.Please charge to Deposit Account 08-2025 the sum of \$ 510. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.☒ A duplicate copy of this transmittal letter is enclosed.☐ I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:  
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Rev 10/07 (ApplBrief)

Respectfully submitted,

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HP Docket No. 10007033-1

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Appl. No.	: 10/062,681	)
Conf. No.	: 2182	)
Appellant	: Geske et al.	)
Filed	: 01/31/2002	)
Title	: A System And Method For Electronically Monitoring The Content Of Print Data	)
TC / Art Unit	: 2625	)
Examiner	: Qin, Yixing	)
Docket No.	: 10007033-1	)
Customer No.	: 022879	)

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

**APPELLANTS' APPEAL BRIEF**

Sir:

Appellants are appealing from the Final Rejection of claims 1-8, 12-14, and 16-44 in an Office Action dated 07/13/2007 and maintained in Advisory Actions dated 10/30/2007 and 11/20/2007. The Notice of Appeal was filed on 11/30/2007.

**I. REAL PARTY IN INTEREST**

The real party in interest is Hewlett-Packard Development Company, LP, a limited partnership established under the laws of the State of Texas and having a principal place of business at 20555 S.H. 249 Houston, TX 77070, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is a wholly-owned affiliate of Hewlett-Packard Company, a Delaware Corporation, headquartered in Palo Alto, CA. The general or managing partner of

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HPDC is IIPQ Holding, LLC.

## **II. RELATED APPEALS AND INTERFERENCES**

There are no other appeals or interferences known to the real party in interest which will directly affect or be directly affected by, or have a bearing on, the Board's decision in the pending appeal.

## **III. STATUS OF CLAIMS**

Claims 1-8, 12-14, and 16-44 are pending. Claims 9-11 and 15 have been previously canceled. All of claims 1-8, 12-14, and 16-44 stand finally rejected. The Appellants appeal the final rejection of claims 1-8, 12-14, and 16-44.

## **IV. STATUS OF AMENDMENTS**

On 09/12/2007 a response after final rejection was filed that requested reconsideration. No amendment was made to the claims. In Advisory Actions of 10/30/2007 and 11/20/2007, the Examiner indicated that the request for reconsideration filed on 09/12/2007 had been considered and the final rejection maintained as to all pending claims.

## **V. SUMMARY OF CLAIMED SUBJECT MATTER**

The summary is set forth in exemplary embodiments. Discussion of the claimed subject matter can be found at least at the locations in the specification and drawings as identified below.

Independent claims 1, 17, 23, 27-28, and 33 are under appeal. The claimed subject matter relates to categorizing print jobs of a document based on an analysis of the drawing commands contained in the print job. By categorizing the print jobs, the productivity of

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workers producing the print jobs can be measured, the number of non-work related print jobs limited, or users incentivized or rewarded based on their printing habits (p.1, ln. 9-25). Fig. 2 of the present application is reproduced below.

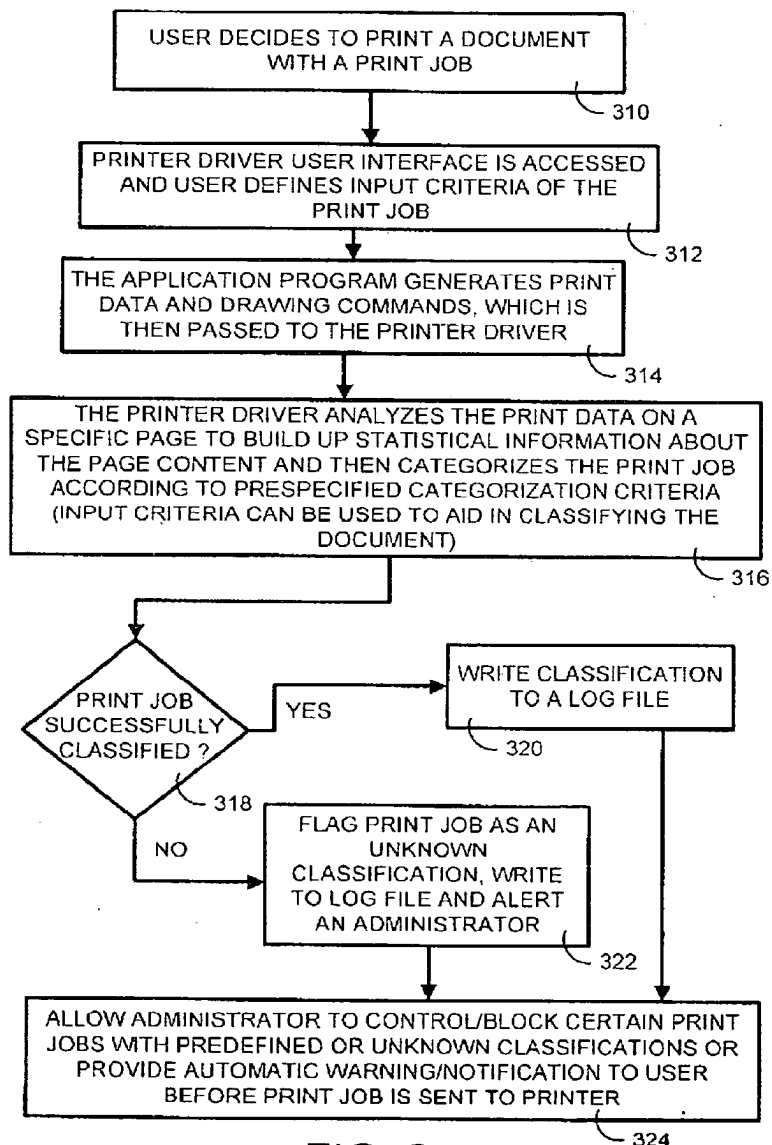


FIG. 2

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Independent claim 1 recites a method for controlling printing of a document (p.1, ln.14-16). The method includes processing 314 (Fig. 2) the document 310 (Fig. 2) to form a print job including print data, the print data including drawing commands (p.5, ln.15-24). The method also includes analyzing 316 (Fig. 2) the drawing commands to build statistical information about content within the print data (p.5, ln.24-26). The method further includes categorizing 316 (Fig. 2) the print job using the statistical information according to pre-specified categorization criteria (p.5, ln.26-28). In some embodiments, the analyzing 316 (Fig. 2) includes sorting 410 (Fig. 4) the drawing commands on each page of the print job by command type, and grouping 412 (Fig. 4) the sorted drawing commands into predetermined object types so as to identify a percentage of the drawing commands in the print job that is associated with each of the predetermined object types (p.8, ln.6-15).

Independent claim 17 recites a system for managing printing operations on a computer (p.3, ln.14-22). The system includes an application program 318 (Fig. 3) that generates drawing commands for printing a document (p.7, ln.11-13). The system also includes a statistical module 122 (Fig. 1), 325 (Fig. 3) that collects the drawing commands and collapses the collected drawing commands into pre-determined classifications (p.7, ln.24 - p.8, ln.15). The system further includes a filtering module 124 (Fig. 1), 327 (Fig. 3) coupled to the statistical module 122 (Fig. 1) that filters the pre-determined classifications using pre-specified category criteria and categorizes the print job into at least one predefined print job category (p.8, ln.16 - p.9, ln.3).

Independent claim 23 recites, in a system for electronically monitoring the contents of a print job generated from a document, a computer-readable medium having computer-executable instructions for performing a process on a computer (p.3, ln.19-22). The process performed by the computer-executable instructions on the medium includes processing 314 (Fig. 2) the document 310 (Fig. 2) to form the print job including print data, the print data including drawing commands (p.5, ln.15-24). The process performed by the computer-executable instructions on the medium also includes statistically analyzing 316 (Fig. 2), 412 (Fig. 4) the print data to form object type percentages using the drawing commands (p.7, ln.24-30). The process performed by the computer-executable instructions on the medium

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further includes classifying 316 (Fig. 2) the print job using the statistical analysis and according to pre-specified categorization criteria (p.8, ln.26 – p.9, ln.3). The process performed by the computer-executable instructions on the medium additionally includes storing 320 (Fig. 2), 342 (Fig. 3) the classification in a log file and using the classification from the log file for examination and for building, enhancing and verifying future classification matches (p.9, ln.13-31).

Independent claim 27 recites a system for managing print jobs of documents containing at least one page (p.3, ln.14-22). The system includes means for collecting drawing commands for a given page (p.7, ln.33 – p.8, ln.5). The structure corresponding to the collecting means is statistical information builder 325 (Fig. 3) (p.7, ln.24-32) or statistical module 122 (Fig. 1) (p.3, ln.23-31). The system also includes means for collapsing 412,414 (Fig. 4) the collected drawing commands into pre-determined categories (p.8, ln.6-15). The structure corresponding to the collapsing means is statistical information builder 325 (Fig. 3) (p.7, ln.24-32) or statistical module 122 (Fig. 1) (p.3, ln.23-31). The system further includes means for classifying 316 (Fig. 2) the print job using the pre-determined classifications (p.8, ln.16 – p.9, ln. 3). The structure corresponding to the classifying means is filtering system program 327 (Fig. 3) (p.8, ln.16 – p.9, ln.12) or filtering module 124 (Fig. 1) (p.3, ln.32 – p.4, ln.5).

Independent claim 28 recites a printing system working in a computer environment (p.3, ln.14-21). The system includes an application program 318 (Fig. 3) that generates 314 (Fig. 2) print data for a print job, the print data including drawing commands (p.5, ln.15-24). The system also includes a printer 118 (Fig. 1), 320 (Fig. 3) that receives the print data for printing the print jobs (p.10, ln.2). The system further includes a software printer driver 116 (Fig. 1), 322 (Fig. 3) coupled to the printer 118 (Fig. 1), 320 (Fig. 3) and application program 318 (Fig.3) for analyzing 316 (Fig. 2) the drawing commands to build statistical information about content within the print data (p.5, ln.24-26). The system also includes a filter module 124 (Fig. 1), 327 (Fig. 3) coupled to the software printer driver 116 (Fig. 1), 322 (Fig. 3) for categorizing 316 (Fig. 2) the print job using the statistical information according to pre-specified categorization criteria (p.5, ln.26-28).

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Independent claim 33 recites a method for managing print jobs of documents containing at least one page (p.5, ln.15-16). The method includes collecting 410 (Fig. 4) drawing commands for a given page (p.7, ln.24 – p.8, ln.8). The method also includes collapsing 412 (Fig. 4) the collected drawing commands into pre-determined categories (p.8, ln.3-15). The method further includes classifying 316 (Fig. 2) the print job using the pre-determined classifications (p.8, ln.16 – p.9, ln.3).

## VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-7, 12-13, 16, 23-27, 33, 35, and 43-44 have been rejected under 35 USC §102(e), as being anticipated by U.S. patent 6,542,173 to Buckley ("Buckley").

Claims 8, 17-21, 28-32, 34, and 36-37 have been rejected under 35 USC §103(a), as being unpatentable over U.S. patent 6,542,173 to Buckley ("Buckley").

Claims 14 and 22 have been rejected under 35 USC §103 (a), as being unpatentable over U.S. patent 6,542,173 to Buckley ("Buckley") in view of U.S. patent 5,323,393 to Barrett ("Barrett").

Claims 38-39 have been rejected under 35 USC §103 (a), as being unpatentable over U.S. patent 6,542,173 to Buckley ("Buckley") in view of U.S. patent 6,144,835 to Inoue ("Inoue").

Claim 40 has been rejected under 35 USC §103 (a), as being unpatentable over U.S. patent 6,542,173 to Buckley ("Buckley") in view of Appellants' admitted prior art in the background of the invention.

Claims 41-42 have been rejected under 35 USC §103 (a), as being unpatentable over U.S. patent 6,542,173 to Buckley ("Buckley") in view of U.S. patent 5,146,344 to Bennett et al. ("Bennett").

Claims 1-7, 12-13, 16, and 23-26 stand or fall together.

Claims 27, 33, and 35 stand or fall together.

Claims 43-44 stand or fall together.

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Claims 28-32 stand or fall together.

Claims 17-21, and 36-37 stand or fall together.

Claim 8 stands or falls alone.

Claim 34 stands or falls alone.

Claim 14 stands or falls alone.

Claim 22 stands or falls alone.

Claims 38-39 stand or fall together.

Claim 40 stands or falls alone.

Claims 41-42 stand or fall together.

## VII. ARGUMENT

**A. Claims 1-7, 12-13, 16, and 23-26 were improperly rejected under 35 U.S.C. §102(e) as being unpatentable over U.S. Patent No. 6,542,173 to Buckley ("Buckley").**

As to a rejection under §102, "[a]nticipation is established only when a single prior art reference discloses expressly or under the principles of inherence, each and every element of the claimed invention." *RCA Corp. v. Applied Digital Data Systems, Inc.*, (1984, CAFC) 221 U.S.P.Q. 385. The standard for lack of novelty, that is for "anticipation," is one of strict identity. To anticipate a claim, a patent or a single prior art reference must contain all of the essential elements of the particular claims. *Schroeder v. Owens-Corning Fiberglass Corp.*, 514 F.2d 901, 185 U.S.P.Q. 723 (9th Cir. 1975); and *Cool-Fin Elecs. Corp. v. International Elec. Research Corp.*, 491 F.2d 660, 180 U.S.P.Q. 481 (9th Cir. 1974). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

Appellants contend that claims 1-7, 12-13, 16, and 23-26 were improperly rejected



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because the single cited reference does not disclose all of the essential elements of the claims arranged as required by the claims and in as complete detail as in the claims.

1. The Buckley reference does not disclose all the limitations of Appellants' independent claim 1 in that the limitations of analyzing drawing commands within print data formed by processing a source document to form a print job, and categorizing the print job using the statistical information produced by the analysis of the drawing commands within the print data, is absent from the reference.

Independent claim 1 recites:

"1. A method for controlling printing of a document, comprising:  
processing the document to form a print job including print data, the print data including drawing commands;  
analyzing the drawing commands to build statistical information about content within the print data; and  
categorizing the print job using the statistical information according to pre-specified categorization criteria." (emphasis added)

With regard to the limitations of the processing step, the Examiner refers to col. 7, ln. 41-46 of the Buckley reference:

"once the user has defined one or more document types and has opened a document that the user wishes to print, the user accesses the print driver graphical user interface for the currently selected one of the available printers. The user can then select an autodetermination mode. In the autodetermination mode, the currently opened document that the user wishes to print is analyzed to determine the one of the previously defined document types to be used to print the various objects in the currently opened document." (col. 7, ln. 37-46; emphasis added)

With regard to the limitations of the analyzing and categorizing steps, the Examiner refers to Fig. 1 and col. 4, ln. 56-62 of the Buckley reference:

"if an automatic mode has been selected, a statistical analysis, or some other type of analysis, is performed on the document to be printed to determine its predominant document type. Then, that document is rendered using the set of rendering parameter options associated with the determined document type." (col. 4, ln. 57-62; emphasis added)

Appellants disagree with the Examiner's position that these portions, or any other portions, of the Buckley reference anticipate the limitation of claim 1.

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Instead, the Buckley reference discloses systems and methods that “define rendering parameter options for rendering the objects of a document based on an identified document type, irrespective of the object types of that document's objects”, and which “determine a document's predominant object and apply rendering parameter options to that document's objects based on the determined predominant object type” in order to consume fewer computational or time resources during rendering (Abstract; col. 2, lines 31-35; emphasis added). With regard to document objects, the Buckley reference teaches that

“many documents have a large number of independent text objects, with a relatively small number of graphics type objects and/or photo type objects appearing in the document. Thus, determining the object type of each of the independent objects and applying different rendering techniques based on each object's determined object type is unnecessarily resource and time consuming. Rather, for such documents, it is often sufficient to merely identify a document type for that document, with a predetermined set of rendering techniques to be applied to all of the objects within that document based on the determined document type. In other situations, such as printing an HTML document from an accessed website, a user may be interested in one type of object, such as the text objects, the bitmap objects, the photograph objects or the graphics objects, to the exclusion of the other types of objects. For example, the user may be interested in the text of an article on a newspaper website and thus does not care whether the non-text objects within that web page are optimally rendered. In these examples, optimally rendering each of the various independent objects within the document may unnecessarily consume valuable computational and/or time resources in order to print at an optimized quality level objects whose quality the user is indifferent to.” (col. 2, lines 12-35; emphasis added)

With regard to the operation of the system disclosed by the Buckley reference, and more particularly with regard to the order or sequence in which the particular steps of the method of the Buckley reference are performed,

“once the user has defined one or more document types and has opened a document that the user wishes to print, the user accesses the print driver graphical user interface for the currently selected one of the available printers. The user can then select an autodetermination mode. In the autodetermination mode, the currently opened document that the user wishes to print is analyzed to determine the one of the previously defined document types to be used to print the various objects in the currently opened document.

In particular, in various exemplary embodiments of the systems, methods and graphical user interfaces of this invention, the currently opened document is statistically analyzed to identify at least one predominant object type in the currently opened document. If a single predominant object type is determined, the document type corresponding to the object type is selected as the document type to be used to render the currently opened document. ...

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Once ... the document type be to be used to render the currently opened document has been automatically determined, the user inputs a signal to the printer driver through the graphical user interface, usually by selecting the 'OK' button, that the printer driver is to output the appropriate data and control signals to the currently selected printer to cause that currently selected printer to render the currently opened document using the rendering parameter options of the ... determined document type.

In particular, the printer driver for the currently selected printer, which is stored in the printer driver memory portion 134, accesses, under control of the processor 120, the appropriate rendering parameter options for the selected document type that is stored in the document-type definition memory portion 132. Then, under control of the processor 120, the printer driver stored in the printer driver memory portion 134 communicates with the currently opened document that is stored, along with the appropriate application program for that document, in the application memory portion 136. The printer driver, using the defined rendering parameter options of the selected document type stored in the document-type definition memory portion 132, converts the currently opened document into printer data and printer control commands and outputs the printer data and printer control commands through the input/output interface 110, the links 302 and 312 and the print server 300 to the currently selected printer 310." (col. 7, line 37 – col. 8, line 35; emphasis added)

Thus, the Buckley reference discloses the following sequence or order of operations. First - before any printer data and printer control commands for the document have been generated – the currently opened document is statistically analyzed to identify a predominant object type. It is noted that, since no printer data and control commands for the document have yet been generated, the statistical analysis must necessarily be performed on data that is part of the currently opened source document, such as, for example, a "mixed content document" that may "include text portions, graphics portions, and photograph portions" (col. 1, ln. 18-20). Second, a document type for the currently opened document is determined based on the statistical analysis. In particular, if the source document has a single predominant object type, then the document type corresponding to the predominant object type is selected as the document type to be used to render the currently opened document. In other words, the document is categorized according to the predominant object type contained in the source document. Third, the printer driver, using the defined rendering parameter options of the selected document type, converts the currently opened document into printer data and printer control commands. It is noted that the printer data and printer control commands, according to the Buckley reference, are generated after the document has been statistically analyzed and categorized.

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Accordingly, the statistical analysis performed by the Buckley reference is inherently performed on contents of the source document.

However, the above-described operation of the Buckley reference is completely different from the operation of Appellants' invention as recited in Appellants' claim 1. First, in Appellant' claim 1, the document is processed to form a print job including print data, where the print data includes drawing commands. Second, the drawing commands contained in the print data are analyzed to build statistical information about content within the print data. Third, using the statistical information, the print job is categorized using the statistical information about content within the print data according to pre-specified categorization criteria. In other words, according to Appellants' claim 1, the print data and drawing commands are generated before the statistical analysis and categorization are performed. Only in this manner can the analysis build statistical information about content within the print data.

Thus, the statistical analysis recited in claim 1 is performed not on contents of a source document as disclosed by the Buckley reference, but rather on print data of a print job that has been generated from the source document.

In the Response to Arguments section of the Final Office Action, the Examiner alleges that the Buckley reference "discloses image segmentation and MRC, both of which can be performed on the document in order to help with the statistical analysis. Both image segmentation and MRC can read upon processing the document to form a print job including print data. The print data would, for example, be the various information in the various layers in the MRC document" (Final Office Action, p.2). Appellants disagree.

With regard to image segmentation, the Buckley reference discloses that

"one or more independent image objects of a document can be independent image regions that are identified or determined by segmenting an otherwise unitary document. That is, the image objects can be portions of a document identified by applying any known or later developed image segmentation technique to that document. Because segmentation techniques are well known in the art and play no part of the systems, methods and graphical user interfaces of this invention, these segmentation techniques will not be described in detail herein." (col. 5, lines 45-55; emphasis added)

Thus the reference clearly discloses that image segmentation is performed on the

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source document, not on print data in a print job generated from the source document.

With regard to MRC, the Buckley reference discloses that

“the systems, methods and graphical user interfaces of this invention are particularly useful with documents having one or more different content types. The contents, and thus the content types, of such documents can include text portions or objects, graphics portions or objects and photograph portions or objects, as well as mixed raster content images. For example, the content types could correspond to the various independent document layers of a document resulting from decomposing a document using the mixed raster content (MRC) decomposition technique. U.S. patent application Serial No. 09/xxx,xxx (Attorney Docket No. 104185), filed Nov. 3, 1999, incorporated herein by reference in its entirety, discusses decomposing a mixed raster content image into various independent layers. Such layers can include, for example, a background layer, a foreground layer, foreground-default-color layer, and the like.” (col. 11, line 65 - col. 12, line 15)

As can be best understood about MRC from the disclosure in the Buckley reference, the source document being analyzed contains content for a number of independent layers. For example, a PDF file might utilize MRC to include text, graphics, and photographs in various layers of a single document. However, such a PDF source document would not be a print job, nor would it be print data within a print job. Instead, the Buckley reference teaches that the source document (e.g. the PDF file) would be statistically analyzed, the document type to be used to render the currently opened document automatically determined, and then following a user input signal to the printer driver, the printer driver would output the appropriate data and control signals to the currently selected printer to cause the printer to render the document using the rendering parameter options of the determined document type (col. 7, line 37 – col. 8, line 35).

However, even if, arguendo, and which Appellants do not concede, the Examiner was correct in alleging that image segmentation and MRC are performed on the document in order to help with the statistical analysis and can read upon processing the document to form a print job including print data, the Buckley reference would still fail to anticipate the limitations of claim 1. In particular, the Buckle reference does not disclose the sequential relationship among the steps recited in claim 1. Claim 1 requires that the statistical analysis and categorization be performed after the print job has been generated. However, the Buckley reference discloses that the statistical analysis and categorization is performed before the print

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job is generated – the opposite of claim 1.

In the Response to Arguments section of the Advisory Action, the Examiner argues:

“The Examiner is using a broad interpretation of the words ‘print job’ in this rejection because a print job is interpreted as any file or set of files submitted to be printed. Thus, a print job is not confined to any particular format, and one can interpret a word document to be printed as a print job, just as one can interpret print ready data as a print job. The arguments [sic] does not seem to equate the word print job with a source document. If the source document is a document that is requested to be printed (as in the Buckley reference), then it can reasonable [sic] be interpreted as a print job. The Examiner’s take is that the print job can take a variety of forms, since, again, they are just various interpretations of the same information. Thus, one can consider any form of the document to be printed a print job as there is no set definition that a print job has to be in any particular format or even has to have gone through any processing – it just has to have been requested/submitted for printing.” (Advisory Action, p.2-3; emphasis added)

Appellants disagree.

First, “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). The broad interpretation of the term “print job” contended by the Examiner ignores words of limitation recited in the claim. The claim recites that the print job is a different element from the document, and further recites that the print job is formed by processing the document. The claim also recites that the statistical information used to categorize the print job is built by analyzing the drawing commands included in the print data of the print job.

Second, “During patent examination, the pending claims must be ‘given their broadest reasonable interpretation consistent with the specification.’” (MPEP 2111, citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005); emphasis added).

Appellants’ specification discloses that:

“first a user 110 decides to print a document with a print job (step 310). Second, the user 110 defines input criteria of the print job (step 312) ... [which] can include media size, media type, color, etc. Third, the application program generates print data and drawing commands, which are then passed to the printer driver (step 314). Fourth, the printer driver analyzes the print data on a specific page to build up statistical information about the page content. The printer driver then uses the filtering module 124 to look at the statistical information for categorizing the print job according to pre-specified categorization criteria (step 316).” (specification, p. 5, ln. 16-28)

Thus the specification discloses that a print job is formed from a document by the

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application program processing the document to generate print data and drawing commands, which then, in turn, are subsequently analyzed to build statistical information, which is then used to categorize the print job. The assertion by the Examiner that "one can consider any form of the document to be printed a print job as there is no set definition that a print job has to be in any particular format or even has to have gone through any processing" creates a definition of the term "print job" that is inconsistent with the specification and thus improperly overbroad.

Third, "The broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach." (MPEP 2111, citing *In re Cortright*, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999)). One skilled in the art would not consider a print job formed by processing a document to be equivalent to the document itself.

Accordingly, the novel features of the present invention are not anticipated by the Buckley reference in that the above-discussed essential elements, arranged as required by the claims and recited in as complete detail as in the claim, are absent from the reference. Therefore, the rejection is improper at least for that reason and should be overruled.

2. The Buckley reference does not disclose all the limitations of Appellants' independent claim 1 in that the reference fails to disclose analyzing "drawing commands".

Appellants disagree with the Examiner's characterization of "drawing commands". With regard to drawing commands, the Examiner states that "the drawing commands are the information that describe the text or images in the various layers of the document" (Final Office Action, p.2). Such commands are not drawing commands as recited in Appellants' claim 1 for at least two reasons. First, claim 1 recites that the drawing commands are included in print data of a print job that is formed by processing the document, rather than included in the source document itself as the Examiner apparently considers the Buckley reference as disclosing. There is no disclosure in the Buckley reference that any information that describes the text or images in the various layers of the document are copied directly

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from the source document to the print data of a print job without processing or modification. Thus, because the Buckley reference teaches that the currently opened source document is processed by the printer driver to produce a print job, it is reasonable to conclude that whatever drawing commands may be included in print data of the print job have been generated by the printer driver (i.e. processed or modified) in some manner. Second, any drawing commands that may be present in the printer data or printer control commands generated by the Buckley reference cannot be used for any statistical analysis and categorization operations performed by the Buckley reference because the printer data and printer control commands are not generated until after the document has been statistically analyzed and categorized.

Accordingly, the novel features of the present invention are not anticipated by the Buckley reference in that the above-discussed essential elements, arranged as required by the claims and recited in as complete detail as in the claim, are absent from the reference. Therefore, the rejection is improper at least for that reason and should be overruled.

3. The cited reference does not disclose all the limitations of Appellants' independent claim 23, for similar reasons as argued for independent claim 1.

Independent claim 23 recites limitations similar to claim 1. Claim 23 recites:

"23. In a system for electronically monitoring the contents of a print job generated from a document, a computer-readable medium having computer-executable instructions for performing a process on a computer, the process comprising:  
processing the document to form the print job including print data, the print data including drawing commands;  
statistically analyzing the print data to form object type percentages using the drawing commands;  
classifying the print job using the statistical analysis and according to pre-specified categorization criteria; and  
storing the classification in a log file and using the classification from the log file for examination and for building, enhancing and verifying future classification matches."  
(emphasis added)

With regard to the limitations of the processing, statistically analyzing, and classifying steps, the Examiner relies on the same portions of the Buckley reference relied on for the



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rejection of claim 1 (Advisory Action, p.7). Appellants disagree.

For similar reasons as explained heretofore with regard to claim 1, any statistical analysis and classification operations disclosed by the Buckley reference are performed before the document is processed to form the print job, not after the document is processed to form the print job as recited in claim 23. In addition, the Buckley reference does not perform any statistical analysis of the print data, since any statistical analysis disclosed by the Buckley reference is performed before the print data is generated.

Therefore, Appellants contend that the rejection of independent claim 23 should be overruled at least for the same reasons as explained heretofore for independent claim 1.

4. The rejection of dependent claims 2-7, 12-13, 16, and 24-26 is improper for the same reasons that render the rejection of their base claim 1 or 23 improper.

"A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers." (35 U.S.C. §112, paragraph 4.)

Claims 2-7, 12-13, 16, and 24-26 depend from either base claim 1 or base claim 23, which were rejected under 35 U.S.C. §102(e) based on the Buckley reference. Appellants have argued heretofore the reasons why the rejection of claims 1 and 23 is improper. Because the rejection of base claims 1 and 23 is improper, the rejection of dependent claims 2-7, 12-13, 16, and 24-26 is also improper and should be overruled for at least the same reasons.

**B. Claims 27, 33, and 35 were improperly rejected under 35 U.S.C. §102(e) as being unpatentable over U.S. Patent No. 6,542,173 to Buckley ("Buckley").**

Appellants contend that claims 27, 33, and 35 were improperly rejected because the single cited reference does not disclose all of the essential elements of the claims arranged as required by the claims and in as complete detail as in the claims.

1. The Buckley reference does not disclose all the limitations of Appellants' independent claim 33 in that the limitation of classifying the print job of a

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document using pre-determined categories into which collected drawing commands of the print job of a document have been collapsed is absent from the reference.

Independent claim 33 recites:

"33. A method for managing print jobs of documents containing at least one page, comprising:  
collecting drawing commands for a given page;  
collapsing the collected drawing commands into pre-determined categories; and  
classifying the print job using the pre-determined classifications." (emphasis added)

With regard to the limitations of the collapsing step, the Examiner contends that these limitations are taught by the Buckley reference at col. 11, ln. 66 – col. 12, ln. 15 (Advisory Action, p.7-8). Appellants disagree.

The cited portion of the Buckley reference discloses that

"the systems, methods and graphical user interfaces of this invention are particularly useful with documents having one or more different content types. The contents, and thus the content types, of such documents can include text portions or objects, graphics portions or objects and photograph portions or objects, as well as mixed raster content images. For example, the content types could correspond to the various independent document layers of a document resulting from decomposing a document using the mixed raster content (MRC) decomposition technique. U.S. patent application Serial No. 09/xxx,xxx (Attorney Docket No. 104185), filed Nov. 3, 1999, incorporated herein by reference in its entirety, discusses decomposing a mixed raster content image into various independent layers. Such layers can include, for example, a background layer, a foreground layer, foreground-default-color layer, and the like" (col. 12, ln. 2-14; emphasis added)

For similar reasons as have been discussed heretofore with reference to claim 1, the Buckley reference does not classify (i.e. determine the predominant object type of) a print job based on drawing commands. First, the reference does not collect and collapse drawing commands of a print job into categories; instead, the reference discloses only that different types of content, such as text, graphics, or photographic object, may correspond to independent document layers of a document. Second, any operations performed according to the Buckley reference that may, arguendo, be similar to the collapsing and classifying steps of claim 33 are not performed on the print job, but rather are performed on the document from which the print job is generated. Finally, because any drawing commands that may,

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arguendo, be disclosed in the Buckley reference cannot be generated until after the predominant object type has been determined, it would be impossible for a print job of the Buckley reference to be classified based on drawing commands which have not yet been generated at the time the classification operation is performed.

Accordingly, the novel features of the present invention are not anticipated by the Buckley reference in that the above-discussed essential elements, arranged as required by the claims and recited in as complete detail as in the claim, are absent from the reference. Therefore, the rejection is improper at least for that reason and should be overruled.

2. The rejection of dependent claim 35 is improper for the same reasons that render the rejection of its base claim 33 improper.

Claim 35 depends from base claim 33, which was rejected under 35 U.S.C. §102(e) based on the Buckley reference. Appellants have argued heretofore the reasons why the rejection of claim 33 is improper. Because the rejection of base claim 33 is improper, the rejection of dependent claim 35 is also improper and should be overruled for at least the same reasons.

3. The cited reference does not disclose all the limitations of Appellants' independent claim 27, for similar reasons as argued for independent claim 33.

Independent claim 27 recites similar limitations to the collecting and classifying steps recited in claim 33. With regard to this limitation, the Examiner relies on the same portions of the Buckley reference relied on for the rejection of claim 33 (Advisory Action, p.7-8). Therefore, Appellants contend that the rejection of independent claim 27 should be overruled at least for the same reasons as explained heretofore for independent claim 33.

**C. Claims 43-44 were improperly rejected under 35 U.S.C. §102(e) as being unpatentable over U.S. Patent No. 6,542,173 to Buckley ("Buckley").**

Appellants contend that claims 43-44 were improperly rejected because the single cited

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reference does not disclose all of the essential elements of the claims arranged as required by the claims and in as complete detail as in the claims.

1. The rejection of dependent claims 43-44 is improper for the same reasons that render the rejection of their base claims 1 improper.

Claims 43-44 depend directly or indirectly from base claim 1, which was rejected under 35 U.S.C. §102(e) based on the Buckley reference. Appellants have argued heretofore the reasons why the rejection of base claim 1 is improper. Because the rejection of base claim 1 is improper, the rejection of dependent claims 43-44 is also improper and should be overruled for at least the same reasons.

2. The Buckley reference does not disclose all the limitations of Appellants' dependent claim 43 in that the limitation of sorting the drawing commands of the print job by command time, and grouping the sorted drawing commands into predetermined object types, is absent from the reference.

Appellants contend that dependent claim 43, and its sub-dependent claim 44, were further improperly rejected because the cited reference does not teach or suggest all of the limitations of the claims. Claim 43 recites:

"43. The method of claim 1, wherein the analyzing includes sorting the drawing commands on each page of the print job by command type, and grouping the sorted drawing commands into predetermined object types so as to identify a percentage of the drawing commands in the print job that is associated with each of the predetermined object types." (emphasis added)

With regard to the limitations of the collapsing step, the Examiner contends that these limitations are taught by the Buckley reference at col. 8, ln. 2-7 (Advisory Action, p.8):

"Moreover, the results of the analysis, such as the raw numbers for either the total number of objects of each type or the total proportion of a document represented by objects of each type, can be weighted based on user defined preferences when automatically determining the document type." (col. 8, ln. 2-7)

Appellants disagree.

The Buckley reference (col. 8, lines 2-7) discloses the counting of, or determining the proportion of, objects. The reference further discloses that objects may be one of "three

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different types of image objects: graphical objects 12, bitmap objects 14 and text objects 16" (col. 3, ln. 21-23). However, objects are different from drawing commands, which are recited in claim 43. Claim 43 interrelates drawing commands with objects, reciting that the drawing commands of the print job are sorted by command type, and that the sorted drawing commands are then grouped into object types so as to identify the percentage of drawing commands in the print job associated with each object type. Such limitations are totally absent from the cited reference. The Buckley reference fails to anticipate claim 43 because the single cited reference must disclose all of the limitations of the claim.

Furthermore, for similar reasons as have been explained above with reference to claim 1, the Buckley reference does not disclose analyzing the print job as recited in claim 43, but instead discloses analyzing the document from which the print job is generated. The Buckley reference does not analyze drawing commands in a print job, because any drawing commands would not be generated from the document until after its analysis has been completed and a predominant object type determined.

Accordingly, the novel features of the present invention are not anticipated by the Buckley reference in that the above-discussed essential elements, arranged as required by the claims and recited in as complete detail as in the claims, are absent from the reference. Therefore, the rejection is improper and should be overruled at least for this additional reason.

**D. Claims 28-32 were improperly rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,542,173 to Buckley ("Buckley").**

As to a rejection under §103(a), the U.S. Patent and Trademark Office ("USPTO") has the burden under §103 to establish a *prima facie* case of obviousness by showing some objective teaching in the prior art or generally available knowledge of one of ordinary skill in the art that would lead that individual to the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Manual of Patent Examining Procedure (MPEP) section 2143 discusses the requirements of a *prima facie* case for obviousness. That section provides as follows:

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To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and reasonable expectation of success must be found in the prior art, and not based on Appellant's disclosure.

More recently, the Supreme Court, quoting *In Re Kahn*, 441 F.3d, 977, 988 (CA Fed. 2006), has clarified that "[R]jections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness" *Teleflex Inc. v. KSR Int'l Co.*, 82 USPO2d 1385, 1396 (S.Ct. 2007).

Appellants contend that claims 28-32 were improperly rejected because (1) the applied reference does not teach or suggest all of Appellants' claim limitations; (2) there is no articulated reason with some rational underpinning to modify reference teachings; and (3) the Buckley reference teaches away from the modification. Such could be possible only in hindsight and in light of Appellants' teachings.

1. The cited reference does not teach or suggest all the limitations of Appellants' independent claim 28 in that the features of categorizing a print job using statistical information built from analyzing drawing commands included in print data for a print job are absent from the reference.

Independent claim 28 recites:

"28. A printing system working in a computer environment, comprising:  
an application program that generates print data for a print job, the print data including drawing commands;

a printer that receives the print data for printing the print jobs;

a software printer driver coupled to the printer and application program for analyzing the drawing commands to build statistical information about content within the print data; and

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a filter module coupled to the software printer driver for categorizing the print job using the statistical information according to pre-specified categorization criteria.” (emphasis added)

In rejecting claim 28, the Examiner states that “although Buckley does not call the items in his invention a statistical and a filtering module, the functions are essentially the same” (Advisory Action, p.12). Appellants disagree.

With regard to an application program that generates print data for a print job, the print data including drawing commands, the Buckley reference discloses:

“The application memory portion 136 includes any currently executing programs, such as Internet and other document browsers, word processing programs, graphics programs and the like, that the user can use to open new or stored files and to send the contents of the opened files to the printer 310. The printer driver memory portion 134 stores printer drivers for the particular ones of the printers 310 and the like that the user can direct print jobs to through the printer server” (col. 6, ln. 57-65; emphasis added)

However, with regard to the software printer driver and the filter module, the Examiner refers to Fig. 1 and col. 4, ln. 56-62 of the Buckley reference:

“if an automatic mode has been selected, a statistical analysis, or some other type of analysis, is performed on the document to be printed to determine its predominant document type. Then, that document is rendered using the set of rendering parameter options associated with the determined document type.” (col. 4, ln. 57-62; emphasis added)

Thus, for similar reasons as explained heretofore with reference to claim 1, the Buckley reference fails to anticipate claim 28 because, in the reference, the analysis and categorization is performed on the document to be printed, not on the print job generated by the printer driver from the document to be printed.

In addition, also for similar reasons as explained heretofore with reference to claim 1, claim 28 requires that the drawing commands be generated before the print job is categorized because the generated drawing commands are then used to perform the categorization. But in the Buckley reference, conversely, the drawing commands are not generated until after the predominant object type (i.e. the category) has already been determined, because the predominant object type determines the set of rendering parameter options to be used in generating the print job (col. 4, ln. 57-62).

Accordingly, the cited reference does not teach or suggest the combination of

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clements recited in Appellants' claim 28. Therefore, the Examiner has failed to establish a *prima facie* case of obviousness at least on these grounds, and the rejection is improper at least for this reason and should be overruled.

2. The Examiner failed to articulate a reason with some rational underpinning to modify the teachings of the Buckley reference.

In order to establish a *prima facie* case of obviousness, there must be an articulated reason with some rational underpinning that would have prompted a person of ordinary skill in the relevant field to modify the prior art elements.

In the rejection of claim 28, the Examiner failed to articulate any reason to modify the teachings of the Buckley reference.

Therefore, absent the Examiner providing such a reason for modifying the Buckley reference, the Examiner has failed to establish a *prima facie* case of obviousness. In addition, any reason to modify the reference could only come from the impermissible use in hindsight of the Appellants' disclosure as a blueprint for the modification. Accordingly, the rejection under 103(a) should be overruled at least for these reasons.

3. There is no rational reason to modify the teachings of the Buckley reference in the necessary manner in that the Buckley reference teaches away from such a modification.

To render claim 28 obvious, it would be necessary that the operation of the Buckley reference be modified such that no predominant object type is identified until after the currently opened document is converted into printer data and printer control commands. However, if the Buckley reference were to be modified in such a manner, then the various text, graphics, and photographic objects contained in the document would necessarily each be rendered according to the optimal rendering technique associated with the corresponding object type. However, the Buckley reference states that such operation would be "unnecessarily resource and time consuming" (col. 2, lines 12-35; see also Abstract). Therefore, the Buckley reference teaches away from such a modification. Because the reference teaches away from



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the necessary modification, the Examiner has failed to establish a prima facie case of obviousness and the rejection under 103(a) should be overruled at least for this reason.

4. The rejection of dependent claims 29-32 is improper for the same reasons that render the rejection of their base claim 28 improper.

Claims 29-32 depend from base claim 28. Appellants have argued heretofore the reasons why the rejection of claim 28 is improper. Because the rejection of base claim 28 is improper, the rejection of dependent claims 29-32 is also improper and should be overruled for at least the same reasons.

**E. Claims 17-21 and 36-37 were improperly rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,542,173 to Buckley ("Buckley").**

Appellants contend that claims 17-21 and 36-37 were improperly rejected because (1) the applied reference does not teach or suggest all of Appellants' claim limitations; (2) there is no articulated reason with some rational underpinning to modify reference teachings; and (3) the Buckley reference teaches away from the modification. Such could be possible only in hindsight and in light of Appellants' teachings.

1. The cited reference does not teach or suggest all the limitations of Appellants' independent claim 17 in that the features of categorizing a print job using statistical information built from analyzing drawing commands included in print data for a print job are absent from the reference.

Independent claim 17 recites:

"17. (Previously presented) A system for managing printing operations on a computer, comprising:

an application program that generates drawing commands for printing a document;  
a statistical module that collects the drawing commands and collapses the collected drawing commands into pre-determined classifications; and

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a filtering module coupled to the statistical module that filters the pre-determined classifications using pre specified category criteria and categorizes the print job into at least one predefined print job category." (emphasis added)

The Examiner has not established a *prima facie* case of obviousness at least because the applied reference does not teach or suggest all of Appellants' claim limitations.

With regard to the software printer driver and the filter module, the Examiner refers to Fig. 1 and col. 4, ln. 56-62 of the Buckley reference:

"if an automatic mode has been selected, a statistical analysis, or some other type of analysis, is performed on the document to be printed to determine its predominant document type. Then, that document is rendered using the set of rendering parameter options associated with the determined document type." (col. 4, ln. 57-62; emphasis added)

In rejecting claim 17, the Examiner states that "[a]lthough Buckley does not call the items in his invention a statistical and a filtering module, the functions are essentially the same" (Advisory Action, p.10). Appellants disagree.

The functions performed according to the Buckley reference, in that the functions are not essentially the same as recited in claim 17. In particular, and for similar reasons as explained heretofore with reference to claim 33, the Buckley reference does not teach or suggest classifying (i.e. determining the predominant object type of) the print job based on drawing commands. First, the reference does not teach or suggest collecting and collapsing drawing commands into categories; instead, the reference discloses only that different types of content, such as text, graphics, or photographic object, may correspond to independent document layers of a document. Second, because any drawing commands that may, *arguendo*, be disclosed in the Buckley reference cannot be generated until after the predominant object type has been determined, it would be impossible for a print job of the Buckley reference to be categorized based on drawing commands which have not yet been generated at the time the categorization operation is performed.

Accordingly, the cited reference does not teach or suggest the combination of elements recited in Appellants' claim 17. Therefore, the Examiner has failed to establish a *prima facie* case of obviousness at least on these grounds, and the rejection is improper at least for this reason and should be overruled.

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2. The Examiner failed to articulate a reason with some rational underpinning to modify the teachings of the Buckley reference.

In order to establish a *prima facie* case of obviousness, there must be an articulated reason with some rational underpinning that would have prompted a person of ordinary skill in the relevant field to modify the prior art elements.

In the rejection of claim 17, the Examiner failed to articulate any reason to modify the teachings of the Buckley reference.

Therefore, absent the Examiner providing such a reason for modifying the Buckley reference, the Examiner has failed to establish a *prima facie* case of obviousness. In addition, any reason to modify the reference could only come from the impermissible use in hindsight of the Appellants' disclosure as a blueprint for the modification. Accordingly, the rejection under 103(a) should be overruled at least for these reasons.

3. There is no rational reason to modify the teachings of the Buckley reference in the necessary manner in that the Buckley reference teaches away from such a modification.

To render claim 17 obvious, it would be necessary that the operation of the Buckley reference be modified such that no predominant object type is identified until after the currently opened document is converted into printer data and printer control commands. However, if the Buckley reference were to be modified in such a manner, then the various text, graphics, and photographic objects contained in the document would necessarily each be rendered according to the optimal rendering technique associated with the corresponding object type. However, the Buckley reference states that such operation would be "unnecessarily resource and time consuming" (col. 2, lines 12-35; see also Abstract). Therefore, the Buckley reference teaches away from such a modification. Because the reference teaches away from the necessary modification, the Examiner has failed to establish a *prima facie* case of obviousness and the rejection under 103(a) should be overruled at least for this reason.

4. The rejection of dependent claims 18-21 and 36-37 is improper for the

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same reasons that render the rejection of their base claim 17 improper.

Claims 18-21 and 36-37 depend from base claim 17. Appellants have argued heretofore the reasons why the rejection of claim 17 is improper. Because the rejection of base claim 17 is improper, the rejection of dependent claims 18-21 and 36-37 is also improper and should be overruled for at least the same reasons.

**F. Claim 8 was improperly rejected under 35 U.S.C. §103(a), as being unpatentable over U.S. Patent No. 6,542,173 to Buckley ("Buckley").**

1. The rejection of dependent claim 8 is improper for the same reasons that render the rejection of its base claim 1 improper.

Claim 8 depends from base claim 1, which was rejected under 35 U.S.C. 102(e) based on the Buckley reference. Appellants have argued heretofore the reasons why the rejection of base claim 1 is improper. Because the rejection of base claim 1 is improper, the rejection of dependent claim 8 is also improper for at least the same reasons.

**G. Claim 34 was improperly rejected under 35 U.S.C. §103(a), as being unpatentable over U.S. Patent No. 6,542,173 to Buckley ("Buckley").**

1. The rejection of dependent claim 34 is improper for the same reasons that render the rejection of its base claim 33 improper.

Claim 34 depends from base claim 33, which was rejected under 35 U.S.C. 102(c) based on the Buckley reference. Appellants have argued heretofore the reasons why the rejection of base claim 33 is improper. Because the rejection of base claim 33 is improper, the rejection of dependent claim 34 is also improper for at least the same reasons.

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**H. Claim 14 was improperly rejected under 35 U.S.C. §103(a), as being unpatentable over U.S. Patent No. 6,542,173 to Buckley ("Buckley") in view of U.S. patent 5,323,393 to Barrett ("Barrett").**

1. The rejection of dependent claim 14 is improper for the same reasons that render the rejection of its base claim 1 improper.

Claim 14 depends from base claim 1, which was rejected under 35 U.S.C. 102(c) based on the Buckley reference, and against which the Barrett reference has not been cited. Appellants have argued heretofore the reasons why the rejection of base claim 1 is improper. Because the rejection of base claim 1 is improper, the rejection of dependent claim 14 is also improper for at least the same reasons.

**I. Claim 22 was improperly rejected under 35 U.S.C. §103(a), as being unpatentable over U.S. Patent No. 6,542,173 to Buckley ("Buckley") in view of U.S. patent 5,323,393 to Barrett ("Barrett").**

1. The rejection of dependent claim 22 is improper for the same reasons that render the rejection of its base claim 17 improper.

Claim 22 depends from base claim 17, which was rejected under 35 U.S.C. 103(a) based on the Buckley reference, and against which the Barrett reference has not been cited. Appellants have argued heretofore the reasons why the rejection of base claim 17 is improper. Because the rejection of base claim 17 is improper, the rejection of dependent claim 22 is also improper for at least the same reasons.

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**J. Claims 38-39 were improperly rejected under 35 U.S.C. §103(a), as being unpatentable over U.S. Patent No. 6,542,173 to Buckley ("Buckley") in view of U.S. patent 6,144,835 to Inoue ("Inoue").**

1. The rejection of dependent claims 38-39 is improper for the same reasons that render the rejection of their base claim 1 improper.

Claims 38-39 depend from base claim 1, which was rejected under 35 U.S.C. 103(a) based on the Buckley reference, and against which the Inoue reference has not been cited. Appellants have argued heretofore the reasons why the rejection of base claim 1 is improper. Because the rejection of base claim 1 is improper, the rejection of dependent claims 38-39 is also improper for at least the same reasons.

**K. Claim 40 was improperly rejected under 35 U.S.C. §103(a), as being unpatentable over U.S. Patent No. 6,542,173 to Buckley ("Buckley") in view of admitted prior art in the Background of the invention.**

1. The rejection of dependent claim 40 is improper for the same reasons that render the rejection of its base claim 1 improper.

Claim 40 depends from base claim 1, which was rejected under 35 U.S.C. 103(a) based on the Buckley reference, and against which the Background of the invention has not been cited. Appellants have argued heretofore the reasons why the rejection of base claim 1 is improper. Because the rejection of base claim 1 is improper, the rejection of dependent claim 40 is also improper for at least the same reasons.

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**L. Claims 41-42 were improperly rejected under 35 U.S.C. §103(a), as being unpatentable over U.S. Patent No. 6,542,173 to Buckley ("Buckley") in view of U.S. patent 5,146,344 to Bennett ("Bennett").**

1. The rejection of dependent claims 41-42 is improper for the same reasons that render the rejection of their base claim 1 improper.

Claims 41-42 depend from base claim 1, which was rejected under 35 U.S.C. 103(a) based on the Buckley reference, and against which the Bennett reference has not been cited. Appellants have argued heretofore the reasons why the rejection of base claim 1 is improper. Because the rejection of base claim 1 is improper, the rejection of dependent claims 41-42 is also improper for at least the same reasons.

## **VIII. CONCLUSION**

Appellants contend that claims 1-7, 12-13, 16, 23-27, 33, 35, and 43-44 were improperly rejected because the single cited reference does not disclose all of the essential elements of the claim arranged as required by the claim and in as complete detail as in the claim.

Appellants contend that claims 8, 14, 17-22, 28-32, 34, and 36-42 were improperly rejected because the applied references, alone or in combination, do not teach or suggest all of Appellants' claim limitations, there is no articulated reason with some rational underpinning to modify or combine reference teachings, and/or there is no reasonable expectation of success in combining the references. Such a suggestion or motivation could be possible only in hindsight and in light of Appellants' teachings.

Each of these reasons alone distinguishes Appellants' claims from the cited references and makes Appellants' claims non-obvious in light of the cited references.


Overruling of the Examiner's rejections of claims 1-8, 12-14, and 16-44 is respectfully requested.

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**AUTHORIZATION TO PAY AND PETITION  
FOR THE ACCEPTANCE OF ANY NECESSARY FEES**

If any charges or fees must be paid in connection with the foregoing communication (including but not limited to the payment of an extension fee or issue fees), or if any overpayment is to be refunded in connection with the above-identified application, any such charges or fees, or any such overpayment, may be respectively paid out of, or into, the Deposit Account No. 08-2025 of Hewlett-Packard Company. If any such payment also requires Petition or Extension Request, please construe this authorization to pay as the necessary Petition or Request which is required to accompany the payment.

Respectfully submitted,



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## IX. CLAIMS APPENDIX

1. A method for controlling printing of a document, comprising:  
processing the document to form a print job including print data, the print data including drawing commands;  
analyzing the drawing commands to build statistical information about content within the print data; and  
categorizing the print job using the statistical information according to pre-specified categorization criteria.
2. The method of claim 1, wherein the analyzing to build statistical information is incorporated in a printer driver.
3. The method of claim 2, wherein at least a portion of the printer driver is a software printer driver.
4. The method of claim 2, wherein at least a portion of the printer driver is a firmware printer driver.
5. The method of claim 1, further comprising storing the categorization in a log file.
6. The method of claim 5, further comprising using the categorization information from the log file for examination, building, enhancing and verifying future categorization matches.
7. The method of claim 1, further comprising gathering input criteria from a user before a print job is initiated and categorizing the print job based on the statistical analysis and the input criteria.

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8. The method of claim 1, further comprising:  
classifying the print job as an unknown job type if the categorizing is unsuccessful.

12. The method of claim 5, further including:  
processing the log file so as to determine effectiveness of the categorizing; and  
updating the pre-specified categorization criteria so as to improve the effectiveness of  
the categorizing.

13. The method of claim 12, further including:  
developing at least one new categorization category.

14. The method of claim 5, further including:  
processing the log file so as to characterize printing usage.

16. The method of claim 1, wherein analyzing and categorizing are performed before  
the print job is printed.

17. A system for managing printing operations on a computer, comprising:  
an application program that generates drawing commands for printing a document;  
a statistical module that collects the drawing commands and collapses the collected  
drawing commands into pre-determined classifications; and  
a filtering module coupled to the statistical module that filters the pre-determined  
classifications using pre specified category criteria and categorizes the print job into at least  
one predefined print job category.

18. The system for managing printing operations of claim 17, further comprising a  
secondary filter module that uses the pre-determined classifications and input criteria  
predefined by a user and relating to the printing operation for categorizing the print job.

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19. The system for managing printing operations of claim 17, wherein the drawings commands include at least one of vector graphics, raster graphics or textual fonts and are predefined by an administrator.

20. The system for managing printing operations of claim 17, wherein the statistical module is incorporated in a software printer driver.

21. The system for managing printing operations of claim 17, further comprising a client monitoring program that determines whether a new classification category needs to be developed.

22. The system for managing printing operations of claim 21, wherein the client monitoring program is preprogrammed to send an error message to a user attempting to initiate the print job blocking all print jobs that are classified with unknown designations.

23. In a system for electronically monitoring the contents of a print job generated from a document, a computer-readable medium having computer-executable instructions for performing a process on a computer, the process comprising:

processing the document to form the print job including print data, the print data including drawing commands;

statistically analyzing the print data to form object type percentages using the drawing commands;

classifying the print job using the statistical analysis and according to pre-specified categorization criteria; and

storing the classification in a log file and using the classification from the log file for examination and for building, enhancing and verifying future classification matches.

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24. The computer-readable medium having computer-executable instructions for performing the process of claim 23, further comprising gathering input criteria from a user before the print job is initiated and classifying the print job based on the statistical analysis and the input criteria.

25. The computer-readable medium having computer-executable instructions for performing the process of claim 24, further comprising monitoring all print jobs and providing at least one of an automatic rejection, acceptance or confirmation of the print job as user feedback before the print job is sent to peripheral device.

26. The computer-readable medium having computer-executable instructions for performing the process of claim 25, further comprising developing new classification categories based on the monitoring of the print jobs.

27. A system for managing print jobs of documents containing at least one page, comprising:

means for collecting drawing commands for a given page;

means for collapsing the collected drawing commands into pre-determined categories;

and

means for classifying the print job using the pre-determined classifications.

28. A printing system working in a computer environment, comprising:

an application program that generates print data for a print job, the print data including drawing commands;

a printer that receives the print data for printing the print jobs;

a software printer driver coupled to the printer and application program for analyzing the drawing commands to build statistical information about content within the print data; and

a filter module coupled to the software printer driver for categorizing the print job using the statistical information according to pre-specified categorization criteria.

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29. The printing system of claim 28, further comprising a log file that stores the categorization of the print job.

30. The printing system of claim 28, wherein the categorization information from the log file is used for examination, building, enhancing and verifying future categorization matches.

31. The printing system of claim 28, wherein the application program gathers input criteria from a user before a print job is initiated and wherein the filter module categorizes the print job based on the statistical analysis and the input criteria.

32. The printing system of claim 28, further comprising a client monitoring program that approves the print job and allows the print job to be printed without user confirmation.

33. A method for managing print jobs of documents containing at least one page, comprising:

collecting drawing commands for a given page;

collapsing the collected drawing commands into pre-determined categories; and

classifying the print job using the pre-determined classifications.

34. The method of claim 33, wherein the collecting includes counting arc, rectangle, brush pattern and text out commands.

35. The method of claim 34, wherein the pre-determined classifications include text, at least one of solid or unfilled circle line/graphics, clip art style images, and photographic images.

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36. The system of claim 17, wherein the statistical module sorts the drawing commands by command type, and groups the sorted drawing commands into predetermined object types so as to identify a percentage of the drawing commands that is associated with each of the predetermined object types.

37. The system of claim 36, wherein the filtering module compares the percentage of the drawing commands associated with each of the predetermined object types against predefined percentages associated with the pre specified category criteria so as to identify the at least one predefined print job category.

38. The method of claim 1, wherein the categorizing denotes a print job category for the print job, the method further comprising inhibiting printing of the print job if the print job category matches a predefined category.

39. The method of claim 1, wherein the categorizing denotes a print job category for the print job, the method further comprising informing an administrator if the print job category matches a predefined category.

40. The method of claim 1, wherein the categorizing denotes a print job category for the print job, the method further comprising providing an incentive to a user if the print job category matches a predefined category.

41. The method of claim 1, wherein the categorizing denotes a print job category for the print job, the method further comprising billing a user according to a price associated with the print job category.

42. The method of claim 41, wherein different print job categories have different prices.

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43. The method of claim 1, wherein the analyzing includes sorting the drawing commands on each page of the print job by command type, and grouping the sorted drawing commands into predetermined object types so as to identify a percentage of the drawing commands in the print job that is associated with each of the predetermined object types.

44. The method of claim 43, wherein the categorizing includes comparing the percentage of the drawing commands associated with each of the predetermined object types against predefined percentages associated with the pre-specified categorization criteria so as to identify a category for the print job.

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## X. EVIDENCE APPENDIX

None



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## **XI. RELATED PROCEEDINGS APPENDIX**

None